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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,950	09/20/2006	Eric Lundgren	027651-285	6835

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BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
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EXAMINER
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COOLEY, CHARLES E

ART UNIT	PAPER NUMBER
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1774

NOTIFICATION DATE	DELIVERY MODE
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12/20/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
offserv@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,950	<b>Applicant(s)</b> LUNDGREN ET AL.	
	<b>Examiner</b> Charles E. Cooley	<b>Art Unit</b> 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-17 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **FINAL OFFICE ACTION**

1. **This application has been reassigned to Technology Center 1700, Art Unit 1774 and the following will apply for this application:**

Please direct all written correspondence with the correct application serial number for this application to **Art Unit 1774**.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

### ***Priority***

2. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d). All of the CERTIFIED copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

### ***Drawings***

3. The replacement sheet of drawings filed 7 OCT 2010 is approved.

### ***Claim Rejections - 35 USC § 102***

4. The terms used in this respect are given their broadest reasonable interpretation in their ordinary usage in context as they would be understood by one of ordinary skill in the art, in light of the written description in the specification, including the drawings,

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without reading into the claim any disclosed limitation or particular embodiment. See, e.g., *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004); *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989).

The Examiner interprets claims as broadly as reasonable in view of the specification, but does not read limitations from the specification into a claim. *Elekta Instr. S.A.v.O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ashbrook et al. (US 4,957,626).**

The patent to Ashbrook et al. '626 discloses a method of continuously mixing two flows, which comprise a first, larger flow at 36 and a second, smaller flow at 38, where the second flow 38 is introduced into the first flow 36 in a direction opposite to that of the first flow (Figure 4), and the mixed flows are caused to change direction immediately after the mixing process by exiting at 34, wherein the first flow 36 is throttled by conical member 32 and divided into a plurality of subflows immediately before the mixing, the

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subflows being divided by one subflow from 32 and another flow through the depicted inlet pipe within 32 as seen in Fig. 4 - note these same inlet pipes are described as elements 43, 43' in referenced US patent no. 4,261,521 (see col. 3, lines 26-28 and 63-65 of the '521 patent) to the same inventor. Thus, the first larger flow from 36 and the injected flow from the inlet pipe [43] collide with the second smaller flow from 38 at a point about halfway between the nozzles 32 and 42 (see col. 5, lines 9-14).

### ***Allowable Subject Matter***

7. Claims 2-17 are allowable over the prior art of record.
8. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 2-17 are allowed in view of Applicant's remarks filed 7 OCT 2010.

### ***Response to Amendment***

9. Applicant's arguments filed 7 OCT 2010 have been fully considered but they are not persuasive.

With regard to Ashbrook et al. '626, Applicant remarks that "the downward flow through the vortex nozzle 32 shown in Fig. 4 of Ashbrook et al. and the upward flow through the inlet pipe within the vortex nozzle 32 shown in Fig. 4 of Ashbrook et al. are not mixed with the flow entering by way of the ozone inlet line 38. Claim 1 is thus allowable over the disclosure in Ashbrook et al."

However, the inlet pipe within nozzle 32 is employed for “injecting materials into the nozzle” (see col. 3, lines 26-28 and 63-65 of the ‘521 patent), thus Applicant’s discussion of “upward flow through the inlet pipe” is not understood since supplemental materials are injected through this inlet pipe. Therefore, the injected flow is toward the nozzle outlet 32 rather than upward and away from the nozzle outlet as Applicant asserts. It thus follows that the first larger flow from 36 (sewage) and the injected flow from the inlet pipe [43] (e.g., pigment, carbon black, etc.) both collide with the second smaller flow from 38 (ozone) at a point about halfway between the nozzles 32 and 42 (see col. 5, lines 9-14). Since the first larger flow, the injected flow from the inlet pipe, and the second smaller flow all collide at this point between the nozzles, it follows that every one of these materials combine (i.e., mix) at this point (see col. 4, line 30 – col. 5, line 15). Accordingly, Applicant’s conclusion that the flows in Ashbrook et al. ‘626 are not mixed in the claimed manner is respectfully not agreed with and the rejection is maintained.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT

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MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION. ANY RESPONSE FILED AFTER THE MAILING DATE OF THIS FINAL REJECTION WILL BE SUBJECT TO THE PROVISIONS OF MPEP 714.12 AND 714.13.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley in Art Unit 1774 whose telephone number is (571) 272-1139. The examiner can normally be reached on Monday - Friday. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Additional assistance can be obtained via the Ombudsman Pilot Program is designed to enhance the USPTO's ability to assist applicants and/or their representatives with issues that arise during patent application prosecution. More specifically, if there is a breakdown in the normal prosecution process, the Ombudsman Pilot Program can assist in getting the process back on track. See <http://www.uspto.gov/patents/ombudsman.jsp> . If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles E. Cooley/

Charles E. Cooley  
Primary Examiner  
Art Unit 1774

15 December 2010